

IN THE CLAIMS:

The following is a complete listing of claims in this application.

Claims 1-13 (canceled).

14. (new) Method for welding electric conductors using ultrasound, comprising the steps of:

introducing the conductors into a compression chamber that is bounded by at least two boundary elements;

closing the compression chamber and welding the wires by applying ultrasound thereto via a first boundary element which is a sonotrode, the conduits being acted upon during welding by pressure via the sonotrode or a second boundary element; and

after welding the conductors, decompressing the compression chamber, then applying ultrasound to the welded conductors, with measurement of a characteristic magnitude of the compression chamber.

15. (new) Method according to claim 14, wherein the compression chamber is bounded by at least three elements, and after the welding, at least one previously fixed and locked element in relation to the welded conductor is decompressed and unlatched.

16. (new) Method according to claim 14, wherein the characteristic magnitude is a geometric value selected from the group consisting of height, width and diagonal length of the compression chamber.

17. (new) Method according to claim 16, wherein the geometric value is the spacing between the first and second elements.

18. (new) Method according to claim 16, wherein the geometric value is measured by a displacement pickup.

19. (new) Method for checking quality of conductors that have been welded in a compression chamber of an ultrasound

welding device, the compression chamber being bounded at least by a sonotrode first element which applies ultrasound and a second element, comprising the steps of:

- introducing the conductors to be welded into the compression chamber;
- compacting and welding the conductors with simultaneous cross section diminution of the compression chamber, the conductors being acted upon by pressure via the second or first element;
- decompressing the compression chamber, the welded conductors remaining between the first element and the second element;
- renewing application of ultrasound with simultaneous action of pressure on the welded conductors via at least one of the first and the second elements; and
- measuring a characteristic magnitude of the compression chamber and/or shape of the welded conductors after the renewed application of ultrasound.

20. (new) Method according to claim 19, wherein the conductors are subjected to pressure via the second element.

21. (new) Method according to claim 19, wherein the quality of the welding is evaluated as a function of the measured characteristic magnitude of the compression chamber and/or the shape of the welded conductors.

22. (new) Method according to claim 19, wherein the characteristic magnitudes of the compression chamber measured is at least one of height, width and diagonal length of the compression chamber.

23. (new) Method according to claim 22, wherein the characteristic magnitude is measured using a displacement pickup.

24. (new) Method according to claim 19, wherein the renewed application of ultrasound takes place over a duration

T with $10 \text{ ms} \leq T \leq 250 \text{ ms}$.

25. (new) Method according to claim 19, wherein the renewed application of ultrasound with simultaneous action by pressure on the welded conductors takes place with a pressure P with $1 \text{ bar} \leq P \leq 4 \text{ bar}$.

26. (new) Method according to claim 19, wherein the renewed application of ultrasound with simultaneous action of pressure is applied when the compression chamber is open to substantially destroy the weld when welds of lesser quality are established on the welded conductors.

27. (new) Method according to claim 19, wherein renewed application of ultrasound with simultaneous action of pressure is applied with a decompressed pressure chamber for selective recompression of the weld when proper welding on the welded conductors is established.

28. (new) Method according to claim 19, wherein changes in spacing between the first and second elements with simultaneous action of pressure on the welded conductors taking place during or after the application are measured.